APPENDIX A

Claim 1, as amended, distinguishes patentably over the art of record, by requiring at least one switchable capacitor to be arranged to be switched from an initial finite capacitance value to a substantially open circuit in response to the voltage across the at least one switchable capacitor changing from one side of a threshold voltage to a second side of the threshold voltage, wherein the threshold voltage is between the first and second levels of a voltage source for connection to a first terminal of a circuit including the capacitors, as well as first and second transistors. The capacitors are in circuitry connected between the first terminal and control electrodes of the transistors for causing the first and second transistor paths to be respectively on and off while the voltage source has a first level and an off and on while the voltage source has a second level. The switchable capacitor is in the circuitry and prevents the paths of the first and second transistors from being on simultaneously during transitions between the two levels.

It is difficult to determine whether transistors 86 and 88 of Love U.S. Patent 5,068,553 inherently are both off during a transition. Applicants will not, at this time, belabor this point. Applicants, however, will not concede that the Examiner has satisfied the inherency requirements of the law. In this regard, claim 2, as originally submitted, required a switchable capacitor to be arranged to be switched between a finite capacitance value and a substantially open circuit in response to the voltage across the switch capacitor changing between opposite sides of a threshold voltage between the first and second levels of the voltage at a first input terminal. In Love, an N-channel MOSFET 80 is initially off and switches on immediately in response to a voltage being applied to terminal 76; see column 5, lines 6-16. Hence, it is problematic that capacitor 80 switches as formerly defined by claim 2. However, claim 1 now more specifically states that the capacitor is switched from a finite initial capacitance value to a

substantially open circuit. This is exactly the opposite of the operation of capacitor 70 of Love. Applicants, by going from a finite capacitance value to a substantially open circuit in response to the voltage changing from one side of a threshold to a second side of the threshold, attain a faster operation than can be obtained by the Love arrangement. Love specifically states that capacitor 80 functions as a conventional capacitor during the entire period while the voltage at terminal 76 is at the zero level indicated in Figs. 5a and 5b. In this regard, the attention of the Examiner is directed to the conventional exponential waveforms V_{76} in Figs. 5a and 5b and to the discussion of the MOSFET capacitor in column 5, lines 6-65.

The foregoing change to claim 1 does not require consideration of new issues nor a new search because claims 22 and 23 defined in very specific detail the switching nature of the capacitor now included in claim 1. Hence, entry of the amendment to claim 1 is in order.

Claims 5 and 7, as amended, further distinguish over Love and the other references of record. Claim 5 requires the at least one switchable capacitor to comprise a PFET connected between the gate electrode of an NFET and the power supply terminal connected to the PFET source drain path. Claim 7 requires the at least one switchable capacitor to comprise an NFET connected between the gate electrode of a PFET and the power supply terminal connected to the NFET source drain path. and vice versa. Applicants note the similarity of these distinguishing features to the requirements of claim 10, which the Examiner has indicated to be allowable. Hence, entry of the amendments to claims 5 and 7 is in order since these claims obviously do not require consideration of new issues or a new search.

Applicants traverse the anticipation rejection of claims 1-9, 11 and 22-24 based on Steele U.S. Patent 5,041,741. The Examiner's comment that the functional limitations of preventing the paths of transistors P1 and N1 of Steele is met because the structure of the claim is fully met

is incorrect. Claim 2, as originally presented, required a switchable capacitor to be switched between a finite capacitance value and a substantially open circuit in response to the voltage across the switched capacitor changing between opposite sides of a threshold voltage between first and second levels of a voltage source for connection to an input terminal. The Steele patent has no disclosure of PMOS capacitor C1 and NMOS C2 being switchable as stated. Consequently, the structure of claim 2, as previously submitted, was not fully met.

While capacitors C1 and C2 are PMOS and NMOS field effect transistors, there is nothing in Steele to indicate that they are switchable as claim 2 formerly defined. In fact, the inference is just the opposite because capacitors C1 and C2 are always referred to as capacitors and no switching attributes thereof are ever discussed in Steele. Column 3, lines 10-24 indicate capacitors C1 and C2 are (1) in first and second highpass filters respectively between terminal V_{DD} and node 22 and between ground power supply terminal V_{SS} and node 24 and (2) in lowpass filters respectively between input terminal 18 and node 22 and between input terminal 18 and node 24. If C1 and C2 were switched, the high and lowpass filters would not exist when the capacitors were switched out of the circuit. Hence, the operation Steele desires (high and low pass filtering) would not be attained. Hence, Steele would not have made capacitors C1 and C2 switch as set forth in claim 2, as previously submitted.

Claim 1, as amended, further distinguishes over Steele by requiring the switchable capacitor to be switched from an initial finite capacitance value to a substantially open circuit in response to the voltage across the switchable capacitor changing from one side of a threshold voltage to a second side of the threshold voltage.

Claims 5 and 7, as amended, further distinguish over Steele by requiring the at least one switchable capacitor to comprise a PFET having electrodes connected to a gate electrode of the

NFET second transistor and the power supply terminal connected to the PFET source drain path. Claim 7 requires the at least one switchable capacitor to comprise an NFET transistor having electrodes connected to a gate electrode of the PFET first transistor and the power supply terminal connected to the NFET source drain path. This is exactly opposite from Steele, wherein PMOS capacitor C1 has an electrode connected to the gate electrode of PMOS transistor P1 and NMOS capacitor C2 has an electrode connected to the gate electrode of NMOS transistor N1.

Claim 9, as previously submitted, distinguished over Steele by requiring the at least one capacitor of claim 1 to include first and second voltage controllable switchable capacitors, wherein the capacitors have different first and second thresholds from each other and between the first and second levels of a voltage for connection to a first terminal of the circuit. Steele has no disclosure of capacitors C1 and C2 having differing thresholds between different levels of the voltage IN applied to terminal 18. There is no basis for the Examiner to consider such operation to be inherent in Steele since Steele discusses the capacitors C1 and C2 only in terms of capacitors. The mere fact that capacitors C1 and C2 are PMOS and NMOS devices, respectively, does not mean they are necessarily constructed to have switching thresholds different from each other and between the levels of the voltage applied to terminal 18.

The anticipation rejection of claim 22, upon which claims 23 and 24 depend, based on Steele is wrong because capacitors C1 and C2 of Steele cannot be considered switchable capacitors that are turned on and off as defined in claim 22. Claim 22 defines very specific aspects of when the first and second capacitors are turned on and turned off. Since Steele does not indicate capacitors C1 and C2 are ever turned on or turned off and the Steele discussion indicates capacitors C1 and C2 function in a normal manner, the inherency rejection is incorrect. For example, claim 22 requires a second capacitor to be charged and a first capacitor to be

switched off during a first interval and the second capacitor to be switched off and a first capacitor to be charged during a second interval. During an initial portion of a second transition between the first and second intervals the second capacitor remains turned off and the first capacitor is charged. There is no basis for the Examiner's position that such operation is inherent in Steele merely because Steele discloses capacitors that are constructed as PMOS and NMOS devices.

Claim 23 adds to claim 22 the requirement for the first capacitor to be switched off during the second portion of the first transitional period prior to the value of the first voltage, as applied to the control electrode of the first transistor, reaching a first value. In addition, claim 23 requires the second capacitor to be switched off during the second portion of the transitional period prior to the value of the second voltage, as applied to the control electrode of the first transistor, reaching the second value. Again, there is no basis for the Examiner to conclude that such operation inherently occurs in Steele, merely because Steele discloses PMOS and NMOS structures for a pair of capacitors.

Applicants traverse the rejection of claims 1-9, 11, 14, 19 and 22-24 as being obvious as a result of Hamasaki et al., U.S. Patent 5,694,065, in view of Steele, U.S. Patent 5,041,741. Claims 1-9, 11 and 22-24 distinguish over the combination for many of the reasons set forth previously in connection with the anticipation rejection based on Steele.

Applicants note that this rejection is based only on Hamasaki et al. and Steele. Applicant also does not understand this rejection because the Steele reference, relied on as a secondary reference, is never mentioned in the rejection. After saying there is a rejection based on Hamasaki et al. and Steele, the Examiner discusses a newly-cited patent to Rapp, presumably U.S. Patent 5,280,420. However, applicants are unable to determine if the Rapp reference is

mentioned in connection with claim 19.

In view of the foregoing amendments and remarks, favorable reconsideration and allowance, as well as entry of the amendment, are in order.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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